



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,010	03/26/2004	James Jolly Clark	5853-00501	8984

35690 7590 06/27/2005

MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.
P.O. BOX 398
AUSTIN, TX 78767-0398

EXAMINER

RAO, SHEELA S

ART UNIT PAPER NUMBER

2125

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,010

Applicant(s)

CLARK ET AL.

Examiner

Sheela Rao

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/7/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-22 are pending and presented for examination.
2. Applicant's submission of references on form PTO-1449, filed May 7 2004, has been considered.
A signed copy of the form is attached.

Information Disclosure

Applicant and the assignee of this application are required under 37 CFR §1.105 to provide the following information that Examiner has determined is reasonably necessary to the examination of this application.

- a. In response to this requirement, please provide a copy of the details of the solar panel as stated on page 21 of the specification. The solar panel is stated as being **SP4-80-8** from Plastecs Co. (Webster, MA).
- b. In responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages, the requirement may be met by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in Applicant's disclosure.
- c. The fee and certification requirements of 37 CFR §1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 CFR §1.105 that are included in Applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 CFR §1.105 are subject to the fee and certification requirements of 37 CFR §1.97.

d. Applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR §1.56. Where Applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained may be accepted as a complete reply to the requirement for that item.

e. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-4, 8-12, and 17-22 are rejected under 35 U.S.C. 102(a,e) as being anticipated by Peek et al., US Patent No. 6,675,098 B2.

Peek et al. (hereinafter, "Peek") disclose a system and method for using weather information in determining irrigation schedules for an area. In doing so, the patented invention anticipates the limitations of the claimed invention.

As per the limitations of claims 1, a water irrigation system which comprises a computer system, a sensing unit with a solar panel that receives sunlight which is used to make electricity and the sensing unit further provides output based on the received sunlight (as is also claimed by instant claim 12) . Peek teaches these features at column 9, lines 48-53 wherein the limitations as used within the irrigation control system is disclosed, see figure 4 – item 144 and figure 5 – item 108. The computer system of claim 1 assessing solar insolation and using this data to control irrigation is taught at column 3, beginning at line 15, where Peek explains the weather information being provided to the control system and how it is used to determine the irrigation cycle. The inhibiting of a watering cycle during daylight as claimed by instant claim 3 is essentially taught by Peek at column 3, lines 15 et seq. At this point in the disclosure the weather data being presented to the computer system is taught and the ET rate is explained. It is well within the realm of the data presented to determine not only the time and amount of initiating irrigation but also to select when not to irrigate the land or area.

The solar panel provide electricity to the sensing unit as per claim 2 is taught at column 9, lines 48-53 where the use of the solar panel for providing electricity is stated. The physical position of the sensing unit as claimed by instant claim 3 is depicted in figure 5, item 110, of the reference by Peek. The computer receiving outputs via radio frequency is taught by Peek at column 5, line 42, where the inclusion of a data to radio frequency conversion system is taught.

The use of the computer system to assess zonal evapotranspiration (ET) data based on the solar insolation as in claims 8 and 19, along with the assessing the need of irrigation (claims 9 and 20) and controlling irrigation to meet the zonal needs of irrigation (claims 10, 17, and 21) is disclosed by the reference of prior art at column 3, lines 25-49; column 4, lines 18-23; and column 9, line 45 to column 10, line 19. The use of the computer system to control irrigation based on community irrigation instructions as in claims 11 and 22 is taught by Peek at column 7, line 19 to column 8, line 3.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Peek et al. in view of Applicant's admitted prior art.

The disclosure of the limitations of instant claim 1 as taught by Peek et al. is aforementioned.

With regard to the claimed limitations of claim 5, wherein "the sensing unit is located such that the amount of sunlight received per unit area by the solar panel is within one standard deviation of the average amount of sunlight received per unit area by the zone to be irrigated" is claimed, Applicant asserts on page 21 of the specification, stated heretofore.

"As depicted in FIG. 3, solar panel 132 may be mounted in sensing unit 102. Solar panel 132 may be, for example, SP4-80-8 from Plastecs Co. (Webster, MA). A blocking diode (e.g., BISODICT-ND from Digi-Key, Thief River Falls, MN) may be used with solar panel 132, such that the solar panel/blocking diode combination functions as a charger. In some embodiments, battery 134 (depicted in FIG. 2) may allow for operation of sensing unit 102 for an extended length of time (e.g., at least two weeks) in restricted sunlight. Battery 134 may be rechargeable. In certain embodiments, battery 134 may be a Nicad battery (e.g., from Panasonic, Secaucus, NJ). Battery 134 may have a long life (e.g., up to or greater than 5 years) to reduce maintenance, expense, and/or operator intervention.

Sensing unit 102 may be advantageously positioned to promote exposure of solar panel 132 to sunlight. For example, sensing unit 102 may be advantageously positioned such that solar panel 132 is facing substantially southward with an angle of inclination of about 45°. In an embodiment, solar panel 132 may be located such that the amount of sunlight received per unit area by the solar panel is within one standard deviation of the average amount of sunlight received per unit area by the zone to be irrigated. Solar panel 132 may receive sunlight and produce electricity from the received sunlight. In some embodiments, electricity from solar panel 132 may power at least a portion of sensing unit 102 and/or at least a portion of a computer system of a water irrigation system. For example, electricity from solar panel 132 may power one or more sensors

of sensing unit 102 including, but not limited to, a moisture gauge, a wind sensor, and a temperature gauge. Powering sensing unit 102 with solar panel 132 and battery 134 may facilitate installation, reduce maintenance, and enhance portability of the sensing unit."

Based upon this disclosure, Examiner is interpreting the claimed limitation as being an inherent characteristic of the solar panel disclosed as being used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize such a solar panel in the control system of Peek since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice and the inherent increased efficiency of such a solar panel. *In re Leshin*, 125 USPQ 416.

7. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peek et al. in view of Oliver, US Patent No. 5,870,302.

The limitations of instant claim 1 are taught by the patented invention of Peek et al.

With regard to claims 6 and 7, wherein the inclusion of an infrared receiver and/or transceiver within the computer system is claimed, Peek does not teach or suggest the use of infrared receivers and/or transceivers; although, the use of radio frequency transmission of data is disclosed. For this aspect of the instant claims, the patented invention to Oliver is relied upon. Oliver teaches the use of a variety of communication means and methods, among which is infrared transmission, see column 9, lines 49-58. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include infrared receiving and/or transmitting means as taught by Oliver with the communications means of Peek so as to allow for more resources for communication between sites.

8. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peek et al. in view of Stashkiw et al., US Patent No. 5,847,568.

The limitations of instant claim 1 as taught by Peek et al. are aforementioned.

The connectivity of the irrigation system itself with regard to the valves, irrigation devices, the conduits, and the source of water as well as the control of each is not clearly taught by the disclosure of Peek. With regard to this aspect of the instant invention, the prior art by Stashkiw et al. (hereinafter

"Stashkiw") is relied upon. At column 4, lines 8-43, Stashkiw details the coupling of the valves and/or irrigation devices to the conduits. Furthermore, the transport of water through the conduits and the source of water for the irrigation system is disclosed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have configured the irrigation system as taught by Peek using the coupling features of Stashkiw since the primary role of an irrigation system is to transport water through the land or area needing irrigation. Proper irrigation enhances healthier and bountiful results.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (571) 272-3751. The examiner can normally be reached Monday - Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on (571) 272-3749. The fax number for the organization where this application or any proceeding papers is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. It should be noted that status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sheela S. Rao
Patent Examiner
Art Unit 2125